Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

CURRENT LITERATURE

BOOK REVIEWS

Lotsy's textbook

The first part of the third volume of Lotsy's *Vorträge über botanische Stammesgeschichte*[1] begins with the Coniferae and ends with Casuarinaceae. There are 1055 pages and 661 figures, scarcely any of which are original. The principal literature, especially the morphological, is gathered together and illustrations are lavishly reproduced, often whole plates, rather than merely the figures bearing upon the subject. In the case of such an extensive work it would be impossible to give any lengthy summary or to discuss even the principal conclusions, but a few points might be noted.

In concluding the 286 pages devoted to Coniferae, he finds that the phylogeny is still uncertain, but that they must have come from the great Filicales complex, and that they contain forms in which the ovulate structures should be called a flower and others in which they constitute an inflorescence; consequently, those who are convinced that the angiosperms have come from the Coniferae are at liberty to regard the angiosperm flower as either a strobilus or an inflorescence. Lotsy continues in his previous belief that the Gnetales have not given rise to the angiosperms, but rather represent the end of an evolutionary line.

The monocotyledons, with the exception of the Spadiciflorae, which Lotsy places near the Piperales, form a consistent group, and have been derived from the dicotyledons. The Alismaceae are regarded as the most primitive family and the Orchidaceae as the most advanced. The various families are considered seriatim, and their external habit and internal morphology are well illustrated, but there is little effort to show general tendencies.

Attention may also be called to a few details. In considering Gnetales, Coulter's interpretation of the tissue at the base of the free nuclear embryo sac is questioned, but no new evidence is introduced. In the opinion of the reviewer, Coulter's interpretation is correct and Lotsy's own preparations would show the boundary of the embryo sac between the free nuclear portion and the so-called antipodal region.

Miss Pace's interpretation of the embryo sac of *Cypripedium* is also questioned, Lotsy regarding the two cells resulting from the first division of the megaspore mother cell as two megaspores. This is a surprising conception of the megaspore, for it would mean that a megaspore (and presumably a microspore) could be formed with only one of the reduction divisions, that is, the megaspore would be completely formed at the close of the heterotypic mitosis. Cytologists will hardly accept such an interpretation.

---

[1] Lotsy, J. P., Vorträge über botanische Stammesgeschichte, gehalten an der Reichsuniversität zu Leiden; ein Lehrbuch der Pflanzensystematik. Dritter Band: Cormophyta Siphonogamia. Erster Teil. 8vo. pp. 1055. *figs. 661.* Jena: Gustav Fischer. 1911. *M* 7.14.

The angiosperm embryo sac is interpreted as consisting of micropylar and an antipodal archegonium. This is another view which can hardly be accepted by one who has followed the gradual reduction of the female gametophyte from the bryophytes to the spermatophytes.

The book brings together an immense amount of material and will be useful just as an encyclopedia is useful. In such voluminous publications originality is not to be expected. There is a general index and an index of plant names. Many references to literature are given in the text, but the complete bibliography will be deferred until the work is complete.—CHARLES J. CHAMBERLAIN.

MINOR NOTICES

Forestry in Indiana.—The annual report of the Indiana State Board of Forestry[2] for the past year contains two papers of more than usual interest. The shorter, by STANLEY COULTER, contains a valuable mass of data on the rate of growth of various native tree species found upon the state reservation. Its study should make the selection of the best species for forest planting an easier matter, while at the same time it serves to emphasize the importance of conserving what has been the product of centuries of plant activity.

The longer article, by C. C. DEAM, the secretary of the board, is an illustrated descriptive list of the tree species native to the state and occupies 270 pages of the report. Excellent botanical descriptions of some 125 species are supplemented by full-page drawings of leaves and fruit, together with notes upon the economic uses and horticultural value of the trees, making it a valuable handbook of the forests of the state.—GEO. D. FULLER.

NOTES FOR STUDENTS

Recent work among gymnosperms.—STILES[3] has investigated some material of *Podocarpus*, *Dacrydium*, and *Microcachrys*, and has made it the basis of a synthetic presentation of the classification, morphology, history, and phylogenetic connections of the group. The bringing together of this wealth of details in an organized form will serve the very useful purpose not only of suggesting genetic connections but also of indicating the important gaps in our knowledge. The general features of the group are summarized clearly and compactly under the categories of vegetative organs, spore-producing

---

[2] Eleventh annual report of Indiana State Board of Forestry for the year 1911. pp. 372. *pls. 133.* Indianapolis: Wm. B. Burford. 1912.

[3] STILES, WALTER, The Podocarpeae. Ann. Botany **26**:443–514. *figs. 8. pls. 46–48.* 1912.